

MTA *journal*

Business & News from Automotive World

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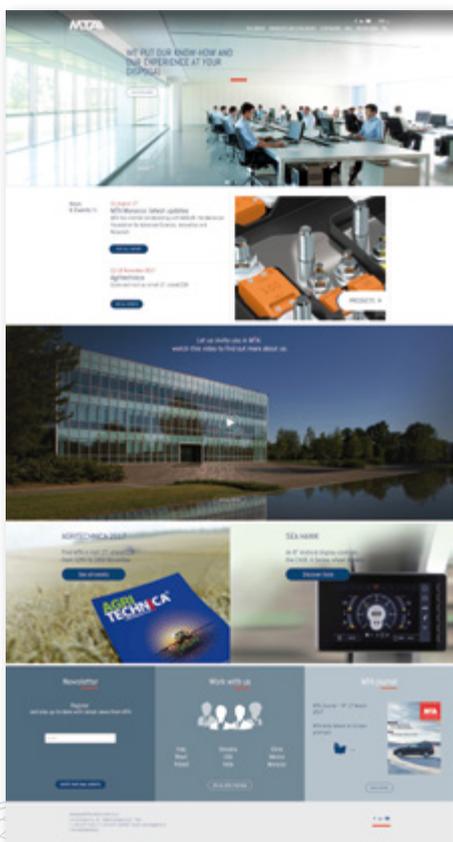


MTA WORLD

MTA Morocco is born

COVER STORY

An 8" Android display controls the
CASE G Series wheel loaders



MTA new website:
lines of evolution.
Online now.

www.mta.it



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EDITORIAL

主编



Welcome to the 18th edition of the MTA Journal. For this important milestone, we have a fresh new look by updating the graphics and layout. With the new streamlined content, we are confident that it will leave you curious to find out more about our current products and latest developments.

In this issue, we have focused on MTA's heritage of supplying the "agriculture" and "off-highway" markets with class leading products. MTA continue to provide innovative new designs to many of the world's leading companies and have showcased a range of products to support the wide and varied applications demanded by these two markets.

Also featured is the latest company information on MTA's expanding global footprint highlighting our new technologies for design and production supported by significant investing in further production facilities around the world.

We hope you enjoy this latest edition of the MTA journal.

我们的杂志已出版 18 期, 在这一具有重要里程碑意义的时刻, 我们的杂志也以崭新的面貌与读者见面了。

杂志的封面和版式均全面改版。内容更加简明扼要, 从而激起读者的好奇心, 让他们想对我们的最新开发成果和其感兴趣的产品一探究竟。

本期着重介绍 MTA 的“农业”和“非公路”设备产品。我们将举例说明为该行业重要品牌设计和生产的产品历史, 以及在多个领域取得的其他重大成果。

当然还有最新的企业新闻, 比如全新的海外驻地盛大开幕、投资研发新技术以及持续开发设计流程。

想必经过我们的介绍您已兴趣盎然、好奇心大增了, 那么, 祝您阅读愉快。

Maria Vittoria Falchetti
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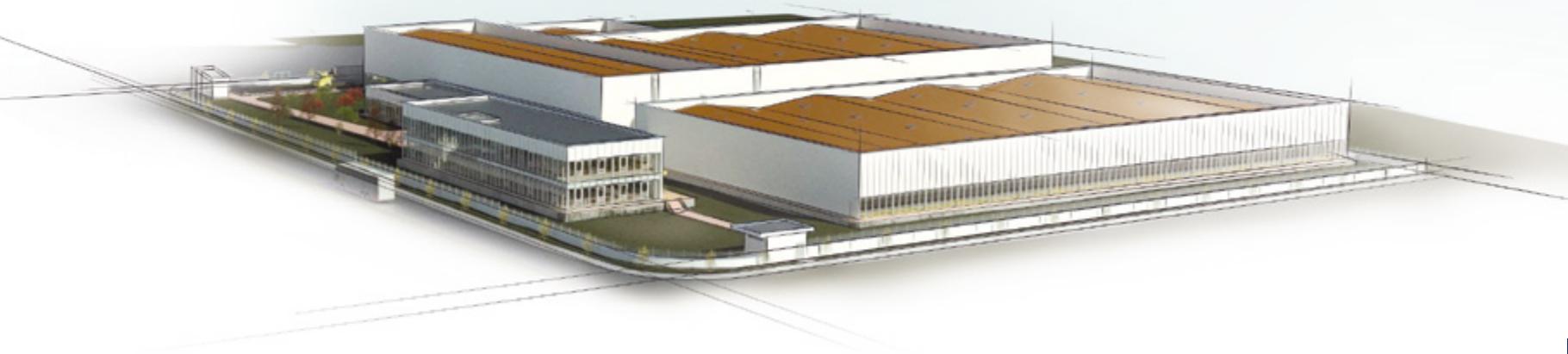
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MTA Morocco is born

MTA 摩洛哥成立



After seven foreign offices, some of which were just recently opened (China and Mexico, respectively in 2014 and 2015), a few months ago the cornerstone was laid for MTA Morocco. In fact, our company will open an establishment in the Kenitra free zone, a city along the Atlantic coast in the Rabat region. Regarding the imminent opening of MTA Morocco, we interviewed Mr. Antonio Falchetti, Executive Director of MTA.

自 MTA 海外分公司达到7家，虽然其中的几家也刚刚成立（MTA 中国成立于2014年，MTA 墨西哥成立于2015年），MTA 的足迹也在几个月前到达了摩洛哥。事实上，MTA 总部将要在大西洋沿岸拉巴特地区盖尼特拉保税区建立 MTA 摩洛哥分公司。对于即将开幕的摩洛哥分部，我们采访了 MTA 的执行董事 - Antonio Falchetti 先生。

Mr. Falchetti, what are the reasons for opening this new plant in Morocco?

Some of Europe's leading car manufacturers, as well as the Tier 1s have long been established in Morocco to produce vehicles for the EMEA market. MTA works with the companies settled in this African country by supplying pre-assembled electromechanical components from its sites in Italy and Slovakia. With the opening of Kenitra, the materials and components for the electromechanical products will arrive at the factory equipped for plastic molding and assembly, and then the finished product will be delivered to the local producers.

How will the plant be organized and when will it open?

Kenitra will cover an area of 50,000 m², including space for offices, assembly, plastics molding, and R&D where engineers and specialized technicians will work. Stylistically it will be in line with our headquarters, built according to principles of energy sustainability with an eye to the well-being of employees. In December of this year the plant will be operational, with the installation of the first presses and component assembly lines.

And the next steps?

The year-end opening will be followed by a future expansion of the production area, already planned, by adding presses and semi-automatic assembly lines, arriving at full capacity in 2021. Automotive IATF certification will take place in 2019, confirming the high production quality that the site will have.

What kind of production will be carried out in Morocco in the short and long term?

In 2018 it will start assembling various types of connectors, and then in 2019 it will switch to the assembly of electromechanical units. In 2020 production of the first electronic components is also planned.

What are the benefits of this facility for customers?

The plant is strategically located in the Free Trade Zone of the Atlantic Free Zone industrial park in Kenitra, which offers tax advantages to companies that decide to invest there, therefore also benefiting their customers. Local authorities are also encouraging the establishment of other companies active in the automotive industry in the Free Trade Zone, so our company will also benefit from interesting synergies.

Will MTA Morocco partner with local universities and research centers for its development?

For quite some time MTA has implemented an Engineering Tutor policy, thanks to which a team of highly specialized engineers supports newly hired engineers to quickly bring them up to speed. We intend to proceed with this approach also in Morocco, using universities as well as local research centers to create a department of excellence in R&D that will contribute to the further development of the production site.

Falchetti 先生，在摩洛哥开办这个新分公司的原因是什么？

一些欧洲主要的汽车制造商和一级供应商已经在摩洛哥建厂来为欧洲，中东，非洲汽车市场供货。MTA通过给一些非洲的公司提供我们在意大利和斯洛伐克生产的未组装的机电元件来与其合作。随着盖尼特拉分部的建立，制造机电元件的原材料和元件首先会被运到这里，在经过增加塑料件和组装后，成品会被运往当地的制造商。

工厂布局如何？何时开幕？

盖尼特拉将会占地 50,000 m²，包括办公场所，组装生产区，注塑区和为工程师及专业技术人员配备的研发区域。风格方面会与总部保持一致，既考虑到节能，也同时兼顾员工。今年12月新工厂将会投入运营，届时首批冲压机和元件组装机会被投入使用。

下一阶段目标是？

在年底开幕后，紧接着我们会进行生产区域的扩张，我们计划增加冲压机和半自动组装线，并逐渐在2021年达到产能峰值。汽车行业的IATF认证也将在2019年进行，确保这个分部将会制造高品质的产品。

摩洛哥分公司短期和长期生产计划是什么？

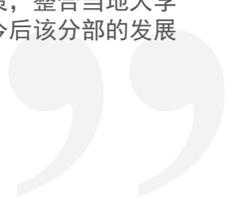
2018年，该分部将会开始组装各种类型的连接器；2019年，将会转换到组装机电单元；2020年，我们也计划生产电子元件。

对于客户来说，这个分公司会给他们带来何种惠利呢？

该工厂位于盖尼特拉大西洋区工业园区的自由贸易区，这里为计划投资的企业提供优惠政策，进而为客户也带来了优惠。地方政府也鼓励在自由贸易区建立汽车企业，因此我们公司也将从有趣的协作中受益。

MTA 摩洛哥会与当地大学或者研究中心协作发展吗？

很长时间以来，MTA一直执行一项工程师的“导师”政策，得益于此，那些高水平的专业工程师可以帮助那些新入职的工程师，让他们快速成长。我们也打算在摩洛哥分部采用同样的政策，整合当地大学和研发中心的资源来成立一个优秀的研发中心，为今后该分部的发展继续发力。



The MTA Morocco R&D Department plans to hire a number of young engineers soon, and it will be able to count on the collaboration of MAScIR (Moroccan Foundation for Advanced Science, Innovation & Research), a non-profit organization that promotes local scientific research and technological development, with which the first contacts have already been made.

MTA 摩洛哥研发部计划通过与 MAScIR 合作，在近期内聘用多位年轻工程师，双方已就该计划建立初步联系。MAScIR (Moroccan Foundation for Advanced Science, Innovation & Research, 摩洛哥尖端科学、创新与研究基金会) 为一家非营利性组织，致力于推动本地的科学研究和技术发展。



MTA Mexico An increasingly strategic site

MTA 墨西哥
其战略性意义日渐增强



Today Mexico is ranked fourth among car exporters and seventh in manufacturing. In the first six months of 2017 car production grew by 16% compared to the same period of 2016. This demonstrates how important it is for a company like ours to have a local presence in the country.

MTA has been in Mexico since 2015 with a production line for assembling units and other electromechanical products for major OEMs and Tier 1 companies having manufacturing sites in the country. MTA Mexico is located in the Bajío region, strategically positioned in the center of the automotive cluster; it already has a number of important customers and its production is steadily increasing.

如今，墨西哥成为第 4 大汽车出口国和第 7 大汽车制造国。与 2016 年上半年相比，2017 年同期的汽车产量同比增长了 16%。这说明，若能在当地开展业务，对于像我们这样的公司意义重大。早在 2015 年 MTA 便在墨西哥建立生产线，为主要的 主机厂 和在该国拥有生产基地的一级供应商装配组件和其他机电产品。MTA 墨西哥工厂位于巴希奥地区，处在汽车企业云集地区的中心，其位置具有得天独厚的战略优势；该工厂已拥有众多重要客户，而且其产量也在稳步增加。



MTA Mexico directly supplies Navistar with 2 control units for power distribution and protection of the main electrical devices, PDM Underhood located in the underhood and PDM Chassis in the frame, which will be used on 7 models, Lonestar, Workstar, Prostar, Durastar, LT Series, Transtar and HX Series of the American OEM.

The 2 products are used in harsh environments and in the presence of possible corrosion-related problems. Hence the choice of V2 grade materials in the bodies of the control units and the covers, external screws in stainless steel, and increased degrees of protection, with IP67 for the Chassis unit and IP69K for the Underhood unit. The two PDMs are distinguished by the presence of a high-thickness copper busbar, while PDM Underhood in particular uses a hybrid technology with PCB logic and press-fit terminal insertion. Each control unit is pre-assembled with the number of fuses required for the specific application.

The line is completed with a series of products installed in the cabin, like a 9-way frame with 9 fuse modules, an extremely flexible solution that allows for different types of configurations by OEMs.

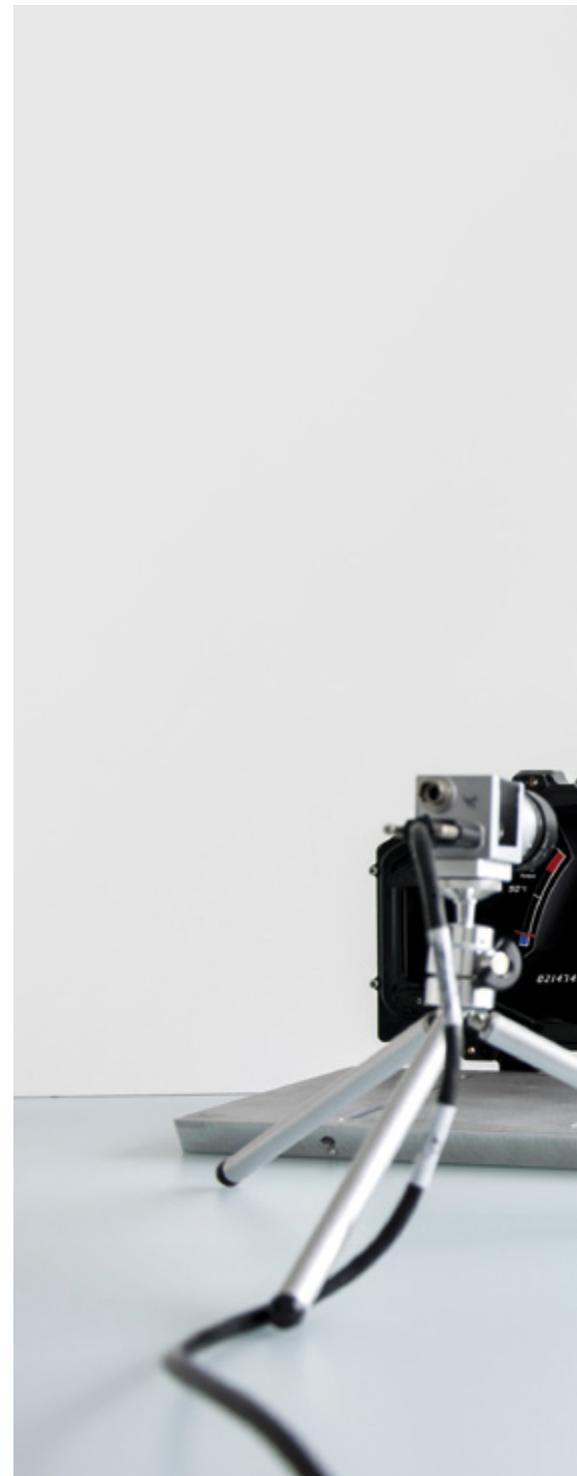
MTA 墨西哥公司向 Navistar 直接供应两款用于配电和主要电气设备保护的控制单元，其中 PDM Underhood 安装在引擎室，PDM Chassis 安装在架中，这两款控制单元将用于该主机厂的 Lonestar、Workstar、Prostar、Durastar、LT 系列、Transtar 和 HX 系列这七款车型中。这两款产品均将用于严苛环境及可能存在腐蚀的环境下。为此，这两款控制单元的主体部分采用 V2 级材料，而外层和外部螺丝采用不锈钢，防护等级因此得以提升，Chassis 单元达到了 IP67 防护等级，Underhood 单元达到了 IP69K 防护等级。这两款 PDM 所使用的超厚铜制母线是其一大特色，其中 PDM Underhood 更特别采用 PCB 逻辑与压配端子嵌入的混合技术。每个控制单元均针对具体应用预先装配了相应数量的保险丝。安装于机柜中的例如带9个保险丝的九路框架等一些产品进一步完善了这一产品线。



NAVISTAR[®]

ASPICE, level 3 achieved!

ASPICE, 达到 3 级!



Increased market demands, the growing complexity of projects, and an ever-diminishing Time To Market require periods of compressed development compared to the past, not to mention greater reliability. All this makes improving process development indispensable.

Automotive Software Process Improvement and Capability Determination, or more simply ASPICE, is the internationally recognized standard in the automotive industry that defines development processes for electronic products. MTA believes in the ASPICE quality process began in 2011 with the goal of reaching Level 2, and this is why in subsequent years improvements have been steadily pursued to achieve Level 3, obtained in 2017 on several Automotive and Agriculture projects.

The ASPICE process defines 5 levels of maturity: the lowest level (Level 0) means that not all processes are performed and therefore several work-products (planning, specifications, design, test protocols, etc.) do not exist; at Level 1 all major documents are available; at Level 2 everything is systematically planned and monitored; for Level 3 company-wide guidelines (or operating instructions) are defined; and at levels 4 and 5 the processes are statistically measured and optimized.

Over the years, the ASPICE process has allowed us to strengthen and improve the quality of the main V-model phases: requirements management (customer, hardware, and software), architecture and system design modeling, quality and robustness of the code (MISRA-C, Unit-Test), use of test-automation for functional checks and regression tests. Test-automation also takes place with the introduction of camera image recognition that can detect notifications, messages, and alarms, making tests extremely reliable and quick even without the presence of the operator.

The improvement of the different phases has led to many benefits, above all the customer's perception of the quality built into its product and the awareness that it will meet all expectations. Also essential is the constant monitoring of the progress of development and validation phases that makes it possible to intervene in a timely fashion in case of delays or unforeseen events.



Test automation: automated video check

不断增加的市场需求、愈趋复杂的项目以及日益缩减的上市时间 (TTM) 都要求我们不断压缩开发周期，同时还要保证产品的可靠性。因此改进流程开发不容忽视。

汽车软件流程改进及性能测定 (Automotive Software Process Improvement and Capability Determination) 简称 ASPICE，是已获得国际认可的汽车行业标准，它明确规定了电子产品的开发流程。MTA 于 2011 年开始实施 ASPICE 质量流程并将目标设定为 2 级，该流程得到了 MTA 的认可，因此在随后几年中，MTA 不断进行改进，以期达到 3 级目标。最终，MTA 于 2017 年在多个汽车和农业项目中达到了这一等级。

ASPICE 流程将完善度划分为 5 个等级：最低级 (0 级) 表示，并未执行所有流程，因此缺少某些工作成果 (计划、说明、设计、测试协议等)；1 级表示所有主要文档都可用；2 级表示所有事项均经过系统规划和监督；3 级表示已经确定适用于整个公司范围的指南 (或操作说明)；4 级和 5 级则表示流程经过统计测量和优化。

多年以来，我们借助 ASPICE 改进并加强了 V 模型主要阶段的质量：需求管理 (客户、硬件和软件)、架构和系统设计建模、代码的质量和可靠性 (MISRA-C、单元测试) 以及利用测试自动化进行功能检查和回归测试。测试自动化还可采用相机图像识别进行，它可以检测通知、消息和报警，让测试更加可靠、迅速，即使在操作员不在场的情况下也能如此。

对各阶段的改进带来了许多好处，尤其是客户能够深入了解其产品质量并树立满足所有期望的意识。最为重要的是，不断监视开发流程和验证阶段能够让我们在发生延误或意外事件时进行及时干预。

Technological innovation at the Rolo plant to drive the state of the art

Rolo 工厂开展技术创新，推动先进技术向前发展

The constant evolution of MTA products to meet market demands requires continuous adaptation of optical, electrical, and electronic production technology. In recent months, Rolo's electronic production plant has certified two new assembly lines for mass production that employ innovative technologies: bonding of displays on plastic frames and inserting Press-Fit terminals in printed circuit boards.

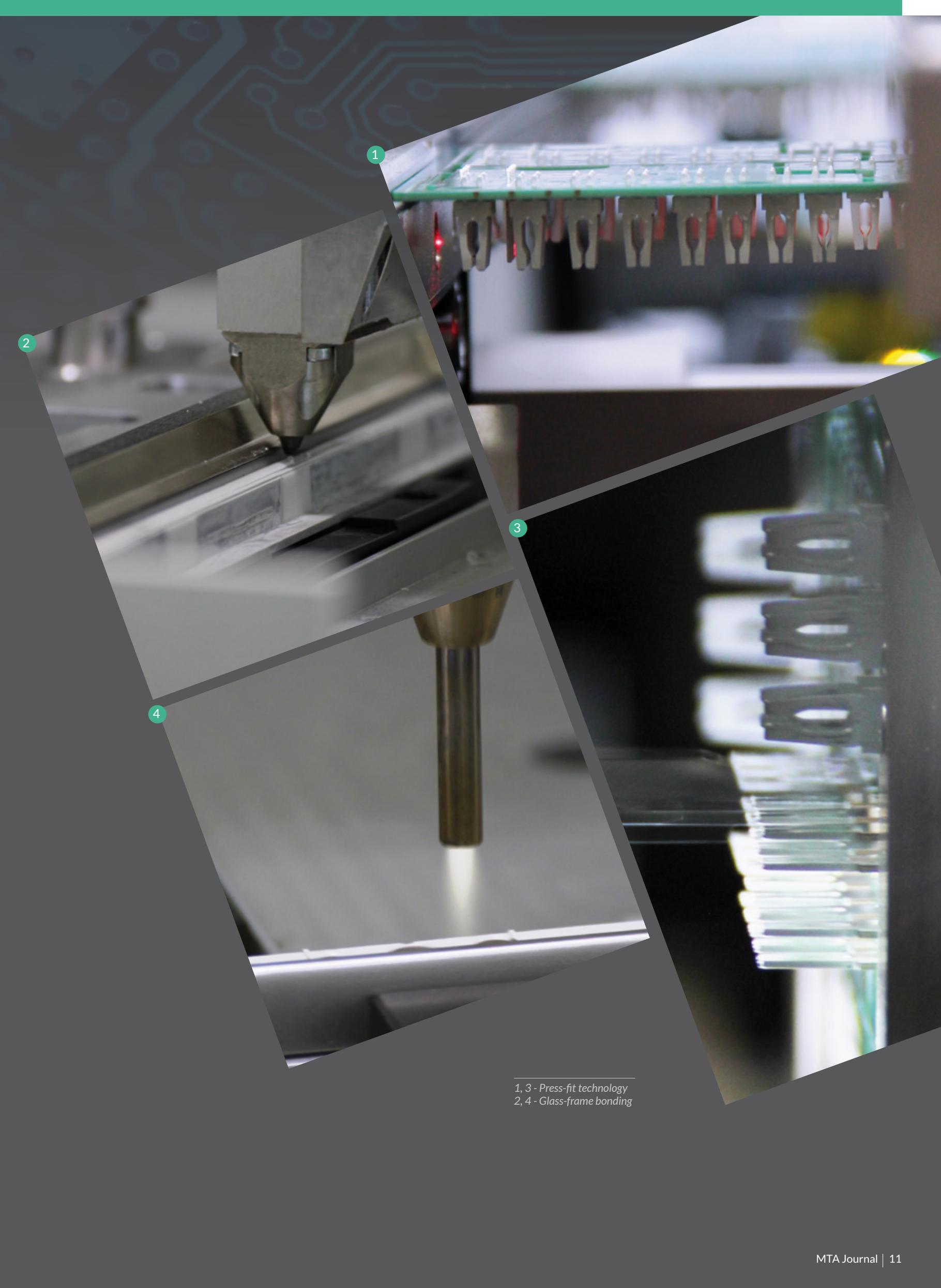
The need to bond the displays, both with simple glass and touchscreens, is due to the new esthetic and functional requirements for human-machine interface modules installed in cars, agricultural machinery, and motorcycles. The market is increasingly moving towards "Full TFT" solutions that are as similar as possible to the applications and forms of tablets or smartphones that are now familiar to everyone. The main difficulty for this type of product lies in guaranteeing levels of functionality and reliability in much more hostile environments (humidity, temperature, vibration, corrosion) than standard consumer devices. The display bonding line uses a particular type of hot melt adhesive that was selected after a long period of comparative testing. In fact we compared the performance of 14 adhesives of four different types and only the one adopted passed all the tests called for by the qualification plan. The production line is fully automated and equipped with the latest generation of control techniques (3D laser scanning of the bead of adhesive, weighing with a resolution of milligrams, hermetic seal test) that ensure the quality of the product.

As regards the evolution of electrical and electronic technology, in the Rolo factory MTA has certified the Press-Fit process of inserting terminals into printed circuit boards, which ensures a reliable, solderless electrical connection thanks to a mechanical deformation of the terminal during insertion. This has already made it possible to supply new fuse units that are based on printed circuit board technology, and will in future provide electronic circuit boards with clean connections without the risks of wave soldering. For the Press-Fit terminal assembly line, MTA has chosen the best machine available on the market, supplied by the German company Eberhard, which allows very high productivity (3-4 terminals/second) combined with a complete control of the variables: adaptation to the thickness of the printed circuit board, rigid control of the strength and insertion height of each single terminal, 100% optical control of terminal dimension compliance and in particular the fork gap where fuses and relays will be inserted, complete data traceability of each terminal inserted associated with each single product.

为满足市场需求，MTA 产品需要不断改进，因此我们必须持续改进光学、电气和电子生产技术。近几个月来，Rolo 电子生产工厂的两条采用创新技术的装配线已获得批准，可用于大规模生产：在塑料壳体上粘接显示屏以及向印刷电路板嵌入压配端子。

不管是将显示屏与普通的玻璃还是触摸屏相粘接，都是因为人们对安装于汽车、农业机械和摩托车上的人机界面模块产生了新的审美和功能需求。全“TFT”解决方案愈发成为市场大势所趋，其应用和形式与人们现在十分熟悉的平板或手机相似。此类产品的主要难点在于，在比标准消费设备更为恶劣的环境（湿度、温度、振动、腐蚀）下，保证功能和可靠性的级别。显示屏粘接产线采用一种特殊的热熔胶，我们经过长时间的对比测试后才选中这种热熔胶。实际上，我们对四种不同类型的 14 款粘合剂的性能进行了比较，最终只有已采用的那一种通过了鉴定方案所要求的所有测试。该生产线为全自动生产线，配备了新一代控制技术（粘合剂胶珠 3D 激光扫描、以毫克为分辨率进行称重、密封检测），保证了产品的质量。

在电气与电子技术更新方面，MTA 已经认证了 Rolo 工厂用于将端子嵌入到印刷电路板的压配工艺，利用端子机械连接代替焊接在实现连接的同时保证该工艺的可靠性。该工艺现已可提供基于印刷电路板技术的新保险丝单元，未来还将提供连接更为简洁的电子电路板（无波峰焊接风险）。对于压配端子装配线，MTA 选用了由德国 Eberhard 公司提供的机器，该机器比市面上的其他机器更为出色，它可以实现非常高的生产率（每秒生产 3-4 个端子），还可完全控制变量：调整印刷电路板的厚度、严格控制单个端子的强度和插入高度、对端子尺寸合规性进行 100% 光学控制，尤其是调整保险丝和继电器的嵌入间隙，它还具有完善的数据跟踪功能，能够确保每个产品的每个嵌入端子都有迹可循。



1

2

3

4

1, 3 - Press-fit technology
2, 4 - Glass-frame bonding

Sea Hawk

An 8" Android display controls the CASE G Series wheel loaders

Sea Hawk

凯斯G系列轮式装载机搭配的8英寸安卓显示器

The new product that has sealed the partnership with CNH, one of our major customers, is an Android-based 8" color display. Sea Hawk is its name, and it equips all seven versions of the new CASE G Series Construction Equipment wheel loaders. It is designed to quickly and intuitively track the machine status and settings. The display completely replaces the instrument panel and, if necessary, can become a rear view monitor.

The Sea Hawk display was developed and then produced in our plant in Rolo on an Android platform optimized for vehicular requirements, with safety features developed in accordance with ISO 25119. This Android platform, used for the first time for the development of an off-highway electronic product, includes standard features that have enabled CASE to develop dedicated applications and thus be able to customize the software based on the specific requirements of the new wheel loaders.

Optical bonding that minimizes light reflection, an IP66 degree of protection, and high resistance to vibrations and extreme temperatures make this display ideal for the off-road applications of these vehicles.

该新产品是与我们主要的客户 CNH 合作开发的，这是一款名为 Sea Hawk 的基于安卓系统的8英寸彩色显示器，兼具所有7种版本的新凯斯 G 系列工程设备轮式装载机系统。它可以快速直观的追踪机器状态和设置。这款显示器完全替代了仪表盘并且在有需求时，可作为设备后部视线的监视器。

这款 Sea Hawk 显示器在我们罗洛工厂研发制造，在安卓平台上根据车辆要求优化，根据 ISO 25119 开发其安全特性。这次首次用于开发非公路设备电子产品的安卓平台，具有标准功能，使凯斯能够开发专用应用程序，从而能够根据新的轮式装载机的具体要求定制软件。

结合光学从而减少光线反射，IP66 防护等级，高抗震动和抗极端气温，所有这些的特点都使得这款显示器成为非公路汽车的理想设备。

The first Android display used off-highway

Sophisticated treatment with Optical Bonding to facilitate viewing even in direct light

Software implemented directly by the customer based on its specific needs

首款用于非公路设备的安卓显示器

光学连接的精密处理，即使在直射光下也能观察

能直接实现客户特定需求的软件



Spot

A compact and customizable display for Mecalac

Spot

为麦拉克安曼公司设计制造的紧凑型可定制显示器



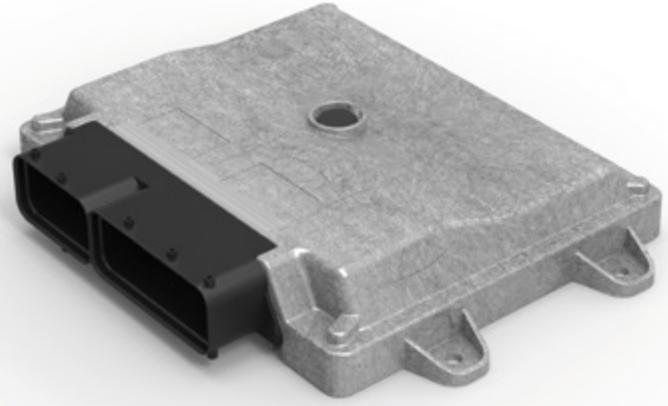
Mecalac Site Dumpers are recognised in the construction market for being compact and robust reliable machines, having user friendly controls and being the first choice for material movement and tipping on any construction site. The same features can be found in our Spot display chosen by the French multinational to equip the new Mecalac Site Dumper to be launched at the end of 2017. Spot has a compact circular dimension of just 106 mm diameter and an IP66 rating for protection. The Spot display has a central dot matrix LCD (160 x 56 pixels), with configurable tell-tale lights where required.

Strength of the product: the MTA Studio software developed by our team of electronic designers has enabled Mecalac to customize Spot displays to meet fast changing production needs without delay or costly software re-writes.

在建造市场上，麦拉克安曼公司的翻斗车以其紧凑、耐用可靠、使用方便而闻名，成为在任何工地上移动和倾倒原材料的首选。在预计2017年年底推出的新型麦拉克安曼翻斗车身上，该法国跨国公司选择了装配同样具备上述优点的“SPOT”显示器。该显示器是直径仅为 106 mm 的紧凑圆形，具有IP66 防护等级。SPOT 显示器拥有一个中心点阵式 LCD (160x56像素)，可在有需求的地方配置指示器灯光。

产品优点：通过 MTA 电子部门设计开发的 MTA Studio 软件，可让麦拉克安曼公司个性化定制其显示器来满足快速变化的生产需求，无需等待，无需支付更改软件费用。

Goldoni chooses Actua *Goldoni 选择 Actua*



The Actua control unit, designed by our electronics division, has been chosen by the Lovol ARBOS group for use on the Goldoni Q110_S110 and E100 tractors that will soon be launched on the market.

The unit, which uses a Dual-Core microcontroller, was chosen thanks to its compact and robust design, as well as its IP67 degree of protection that makes it ideal for the agricultural business.

Its software was developed specifically for this range of Goldoni tractors and is supplied to the OEM in a basic version, which is then implemented by the customer according to the specific features of the vehicle it is mounted on.

The Actua for Goldoni controls all the tractors' functions, like lights, turn signals, joysticks, and more, as well as taking care of the electro-hydraulic distribution by managing the machines' accessories or the PTO. Finally, it includes 62 inputs, of which 45 digital, 13 analogue, and 4 frequency, and 30 outputs, of which 5 PWM.

Actua 控制单元是我们的电子元件事业部设计的产品，Lovol ARBOS 集团已选择将其用于即将在市场上推出的两款拖拉机：Goldoni Q110_S110 和 E100。该元件采用双核微控制器，因其紧凑、稳固的设计，以及适合农用的 IP67 防护等级而被选中。其软件专为 Goldoni 系列拖拉机开发，并向主机厂供应基础版，然后再由客户根据安装该软件的车辆的具体特性实施。适用于 Goldoni 系列拖拉机的 Actua 控制单元可控制拖拉机的所有功能，比如照明、转向信号、控制杆等，并通过管理机械的附件或 PTO 兼顾电动液压分布。最后，它包含 62 路输入（45 路数字量输入、13 路模拟量输入和 4 路频率输入）和 30 路输出（其中有 5 路 PWM 输出）。



Zip

The new compact display for off-highway applications

Zip

外形小巧的全新显示屏，非公路设备应用的理想选择



Zip is the latest display presented by our company within the range developed with the MTA Studio tool. It is a software developed by the electronics division with which the OEM can customize the display according to the uses of the machine on which it will be installed, and exploit this peculiarity to use the product on multiple vehicle platforms.

Zip is a 3.5" TFT with anti-reflection treatment. Its compact size (115.6 x 115.6 x 47 mm) as well as the IP67 degree of protection make it perfect for use on small off-highway work machines, powered by 12V or 24V. Zip has the function of displaying the machine parameters that you always want to be available. Using an optional connection to an external keyboard the operator can then also manage several preset menus.

On the back of the display there are different points of attachment, as well as the possibility of connecting an optional RAM mount; a Gore-Tex valve to allow air circulation; an 8-way connector for CAN network connection; and connectors for various analog and digital inputs.

With Zip the current range of electronic products developed with the MTA Studio software tool rises to 12. These include the two Dyna and Actua control units for driving actuators, and the six instrument panels - Spot, Quik and Quik Plus, Revo and Revo Plus and Smart - able to meet the many needs of OEMs in many sectors. Giotto, Giotto K and Leonardo complete the line, displays that can also be programmed with the Android Studio tool, an Android-based software specific for the automotive world.

Zip 是我公司使用 MTA Studio 工具研发的新款显示屏，现已加入当前的产品组合。MTA Studio 是电子事业部开发的一款软件，借助该软件，主机厂可根据目标车型的用途对显示屏进行定制，而对这一特性进行开发，可让该显示屏产品广泛应用于多种车载平台。

Zip 是一款 3.5" 的 TFT 显示屏且经过抗反射处理。该显示屏可使用 12V 或 24V 供电，尺寸小巧 (115.6 x 115.6 x 47 mm)，具有 IP67 防护等级，是小型非公路应用机器的完美选择。Zip 可以时刻显示您想要随时了解的机器参数。操作员也可以使用外接键盘来管理预设菜单。

显示屏的背面留有各种外设接口，还可方便您连接 RAM 支架；另外还有一个 Gore-tex 空气流通阀门、一个用于 CAN 网络连接的 8 路连接器以及用于各种模拟量和数字量输入的连接器的。

包括 Zip 在内，我们利用 MTA Studio 开发的电子产品数量现已达到 12 种。这些产品包括两个驱动致动器的控制单元 Dyna 和 Actua，六个仪表盘——Spot、Quik 和 Quik Plus、Revo 和 Revo Plus 以及 Smart，这些产品可以满足众多领域的主机厂的各种需求。Giotto、Giotto K 和 Leonardo 是可以使用 Android Studio（一款基于 Android 的软件，专门应用于汽车领域）进行编程的显示屏，进一步完善了该产品线。

3.5" TFT with anti-reflection treatment

Compact size and IP67, ideal for small off-highway machines

Both 12V and 24V power supply

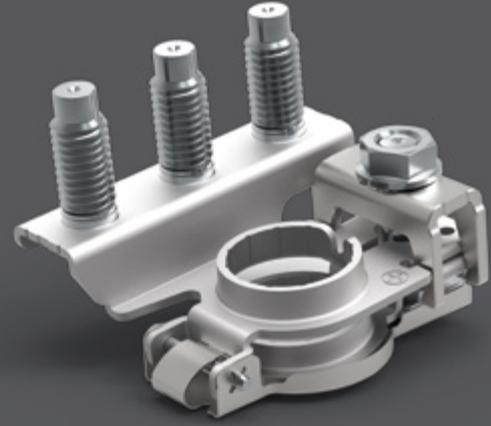
3.5" 的 TFT 显示屏，经过抗反射处理

尺寸小巧，具有 IP67 防护等级，小型非公路机器的理想选择

可使用 12V 和 24V 供电

Go/No-go battery terminal One step forward

通/止电池端子 领先一步



With a production that today counts around 10 million pieces globally, destined for several OEMs in a number of sectors, battery terminals are one of the products that identify our company's electromechanical production. The research and development for this component are continually evolving to meet the developing needs of manufacturers, leading to a series of new products. The last of these is a stamped terminal for the positive and negative poles, with vertical tightening that, for the first time, is distinguished by proprietary technology (developed to achieve the Go/No-go effect) that ensures correct positioning during assembly. Simply stated, the new system inhibits tightening when the terminal has not reached the final position and is therefore not in contact with the battery surface thereby making the lock nut turn idle. The prototype has already been tested both mechanically and electrically, and its excellent performance suggests that this can be the forerunner of a new generation of stamped terminals with vertical tightening. Go/No-go will therefore become a part of our already extensive range of terminals made with stamped, strip type or double ring technology, with studs or crimping version, screw type or quick locking.

作为我公司的代表性机电产品之一，电池端子的全球产量现已达到 1000 万件左右，深受众多领域中多家主机厂的认可。为满足制造商的发展需求，我们不断深入对该元件的研发，成功开发出一系列新产品。其中最新的产品是专为正负极设计的空白端子，该端子首次采用垂直紧固设计，并凭借专利技术（为实现通/止效应而研发）脱颖而出，可在组装过程中确保位置正确。简单来说，在端子未到达最终位置之前，新系统会禁止扣紧，即端子未与电池表面接触时，锁紧螺母不会起作用。产品原型已经过机械和电子测试，其性能十分出色，堪称新一代垂直紧固空白端子的领跑者。我们的端子产品采用冲压、带式或双环技术制成，具有螺柱或压接版本，还有螺纹型或快速锁定型等类型，种类十分繁多，如今通/止端子也即将加入这一产品阵营。



New waterproof fuseholder for MegaVal®

为MegaVal®保险丝设计的新型防水底座

MTA supplies many items developed for heavy duty, tractors and off-highway vehicles. These items feature specific characteristics such as protection against mud and water. The new MegaVal® holder, recently developed, is waterproof, it has high resistance against harsh environments, low and high temperatures and it is very versatile, in fact, it can be fixed in different positions, i.e flat, inclined or vertical.

Two versions for this fuseholder are available: one with a cover with gasket to seal the fuse compartment, the other one with this same cover but with a different shape to protect the 2 stainless screws too. The cover is tethered to the body to avoid losing it; the 2 brackets ensure correct closing and assure high resistance against bumping and tampering.



A next generation fuse for 48V electrical architectures

新一代 48V 电气架构保险丝



Since the traditional 12V system is no longer sufficient to power the many electrical and electronic systems that are increasingly crowding modern vehicles, numerous OEMs are introducing a 48V system.

The 12V power supply will remain delegated to traditional tasks, while the 48V will support the most energy-intensive systems that require greater power. The use of voltage that is four times higher in this second system also makes it possible to limit currents in play while continuing to provide adequate power, and this offers another great advantage: reducing wiring gauge with consequent positive effects in terms of weight, bulk, and costs.

Our company has therefore set up a dedicated team that is working to investigate and identify all possible changes associated with 48V electrical architectures, both in terms of fuses and fuse boxes. As part of this research, we have developed a new fuse in the MidiVal® range for applications on 48V systems, with mechanical polarization to prevent improper replacement.

现代车辆中拥有众多的电气和电子系统，而且呈日益增多的趋势，传统的 12V 系统已不足以满足这些系统的电力需求，因此，许多主机厂推出 48V 系统。

12V 电源仍会继续为传统任务供电，而 48V 电源将用于支持耗电量更大的高耗能系统。后一种系统中使用的电压是前者的四倍，在持续提供充足电力的同时也可以限制起作用的电流，这也带来了另外一大优势：减少线规，从而在重量、体积和成本方面均产生积极效果。

为此我们公司已成立专门的团队，致力于研究和找出在保险丝和保险丝盒方面，可以对 48V 电气架构作出的所有可能相关调整。作为此项研究的一部分，我们已开发出适用于基于 48V 系统的应应用的全新 MidiVal® 系列保险丝，其机械式极化可防止反常替位。

MTA 供应专为重型车、拖拉机和非公路车辆开发的多款产品。这些产品具有多项优异特性，比如能够防泥浆、防水。新近开发的全新 MegaVal® 保险丝盒可应用于恶劣的环境，其防水和耐高低温性能极佳，且功能全面，在实际使用中可以安装在不同的位置，即平面、倾斜或垂直安装皆可。

该款保险丝盒有 2 个版本可选：一个版本配有带垫片的封盖，可密封保险丝室，另一个版本所配封盖功能相同，但形状不同，是为了可以保护 2 个不锈钢螺丝。封盖与主体拴在一起，以避免丢失；2 个支架可确保正确闭合，并保证出色的耐撞击和耐拍压性能。



news

快讯

MTA is now certified AEO

MTA 已获得 AEO 认证



In January our company received Authorized Economic Operator (AEO) certification from the Italian Customs and Monopolies Agency. We can thus benefit from preferential channels for the customs clearance of goods arriving from and leaving for foreign countries, a significant reduction in the number of physical and documentary controls by customs, as well as a priority treatment whenever controls are required. AEO certification follows just by a few weeks another important milestone in the context of simplifying customs formalities: in fact, the Codogno site was authorized for "Local Clearance Procedure" (or "Local Customs Clearance"). This means that goods can leave the site already cleared through customs, with complete documentation.

在今年一月，MTA获得意大利海关和垄断局颁发的授权经济经营者（AEO）认证。因此，我们可以使用优惠的通关渠道处理外国货物的进口和出口他国的货物，大大减少海关的人力和文件管制，并在需要管制的情况下获得优先处理。在 AEO 认证通过前的仅仅几周，另一个重要的简化海关手续的认证被通过：科多尼奥工厂被授予“本地清关程序（或称”本地清关“）”。这也意味着货物在离开工厂的时候已经拥有了完整的清关文件。

India ISO/TS 16949 Certification

印度 ISO/TS 16949 认证



ISO/TS 16949:2009 Certified Quality System for the Automotive Industry

MTA India, situated in Pune, recently received from TÜV SÜD the ISO/TS 16949 certification, a specific standard for the Automotive Industry Quality Management System. This confirms the high and steady qualitative level achieved by its electromechanical production. The certification is just the latest for this location, which continues to evolve. In fact, only last year it had to move to a new structure where production and warehouse were duplicated to cope with increased demand.

坐落在浦那的 MTA 印度最近通过了 TÜV SÜD ISO/TS 16949 认证，一个专门为汽车行业质量管理体系设立的标准认证。这也证实了MTA印度的机电生产达到了超高且稳定的质量水平。该认证只是这个工厂的最新近况，其也在不断持续发展。事实上，也仅仅是在去年，MTA 印度为了应对日益增长的需求搬到了一个新的地点，当然车间和仓库也是完全按照之前来设置的。



China
Forging ahead
中国
不断进取

After just three years from the opening of our commercial office in China and two from the start of production in a certified factory dedicated to assembling electromechanical units, we have just opened a new facility. Also in the Jinshan industrial district, the new production plant occupies an extensive space covering 12,000 m², more than three times larger than the previous one.

The architectural solution chosen for the Chinese site of our company calls for two different constructions, one of which will also start molding plastics, making the plant more independent and ready to meet the needs of local car manufacturers.

在短短的设立贸易公司三年和旨在装配机电元件的经过认证的工厂开始生产两年后，MTA中国又有新动作！同样的地处金山工业区，新工厂占地 12,000 m²，是现有工厂的三倍多。中国工厂的建筑设计方案是为了满足两种不同的结构需求，其中之一就是使工厂更加自主的注塑生产和满足当地汽车制造商的需求。

Brazil
The subsidiary is strengthened
巴西
不断加强的分公司

MTA Brasil, situated in the industrial area of Arujá near Sao Paulo, is a strategic location supplying the important Mercosur market. Constantly expanded to respond to producers who have established production facilities in the area, over the years MTA Brasil has aligned with the standards that distinguish the other sites of the company. Now it is certified IATF 16949, after having obtained the ISO 14001 environmental certification. In addition, to support the production increase of FRB-RB and CBA electromechanical control units mainly for the FCA Group, by 2018 the site's molding department will be equipped with seven new presses, with a tonnage ranging between 80t and 300t.

MTA 巴西位于圣保罗附近的 Arujá 工业区，是一个供给重要的南方共同市场且极具战略位置的地方。其不断扩张是为回应在该地区建立工厂的生产商。多年来，MTA 巴西与集团其他公司不同是其一直与行业标准保持一致。在其获得 ISO 14001 环境认证后，公司又获得了 IATF 16949 认证。此外，为了支持不断增长的 FCA 集团 FRB-RB 和 CBA 机电控制单元生产需求，到 2018 年，该分部模具部门将配备 7 台型号在 80~300 吨之间的压铸机。



MTA Customizable Dashboards and Electronic Control Modules

All the advantages of an exceptionally versatile system

Different dimensions and shapes for an easily configurable product range, featuring elegant design and modern lines with deep attention to safety details, such as anti-reflection and anti-fingerprint treatments, guaranteeing perfect visibility.

From **MTA Studio**, all the possibilities to customize your instrument panels and ECUs according to your needs:

- Specific functions to program devices, graphical HMI and logic control units
- The graphical HMI is WhatYouSeesWhatYouGet: the final graphics are already visible while creating the software
- Programming with C / C ++, LADDER, FBD, for operating logic
- Real-time debugger function
- Libraries with pre-defined blocks (SAE J1939, DM1 alarm logics, datalogger, hourmeters, ...)



- SPOT
- ZIP
- SMART
- QUIK / QUIK PLUS
- REVO / REVO PLUS
- GIOTTO / GIOTTO K
- LEONARDO
- DYNA
- ACTUA

are proud to belong to this family

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We exhibit at
AGRITECHNICA

HANOVER, 12-18 NOVEMBER
Hall 17 Stand C28

